



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/566,550	01/27/2006	Thomas Justel	DE 030272	7296

24737 7590 11/27/2007
PHILIPS INTELLECTUAL PROPERTY & STANDARDS
P.O. BOX 3001
BRIARCLIFF MANOR, NY 10510

EXAMINER
MCKANE, ELIZABETH L

ART UNIT	PAPER NUMBER
1797	

MAIL DATE	DELIVERY MODE
11/27/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/566,550

Applicant(s)

JUSTEL ET AL.

Examiner

Leigh McKane

Art Unit

1797

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 January 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>1/27/06</u> . | 6) <input type="checkbox"/> Other: ____. |

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 3-5, 7, and 10 are rejected under 35 U.S.C. 102(b) as being anticipated by Nakamura (US 6,194,821).

Nakamura teaches an apparatus for reducing contaminants in a fluid stream (col.1, lines 44-53), wherein the apparatus includes a dielectric barrier excimer discharge lamp (col.1, line 64 to col.2, line 7). The lamp filling gas may be xenon, argon, or krypton (col.10, lines 46-50) with a filling gas pressure of 10-60 kPa (col.10, lines 51-55). The lamp radiates UV light of 172 nm, 222 nm, or 308 nm, depending upon the filling gas. See col.5, line 64 to col.6, line 2.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.

2. Ascertaining the differences between the prior art and the claims at issue.
 3. Resolving the level of ordinary skill in the pertinent art.
 4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
5. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nakamura as applied to claim 1 above, and further in view of Say et al. (US 6,063,343).

Nakamura is silent with respect to a catalyst having an upstream end and a downstream end in the apparatus. Say et al. also discloses an apparatus for fluid purification using UV radiation. In the apparatus of Say et al., a photocatalyst **102** having an upstream end (adjacent UV tube **104**) and a downstream end (adjacent outlet **110**). See Figure 1 and 2; col.3, lines 60-61. It would have been obvious to one of ordinary skill in the art to employ the tube of Nakamura in the apparatus of Say et al. as both are used for the decomposition of organic contaminants.

6. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nakamura as applied to claim 1 above, and further in view of Jüstel et al. (US 6,398,970).

Nakamura is silent with respect to the lamp including a phosphor material. Jüstel et al. discloses a device which may be employed in photochemical processes (col.4, lines 64-67). The device includes a xenon-filled dielectric lamp including a phosphor material such as LaPO₄:Pr. See col.2, lines 28-31. It would have been obvious to one of ordinary skill in the art at the time of the invention to include a phosphor such as LaPO₄:Pr in the lamp of Nakamura as these phosphors have been evidenced to emit in the required wavelengths.

7. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nakamura as applied to claim 1 above, and further in view of Wekhof (US 5,144,146).

The excimer lamp of Nakamura is not pulse operated. However, Wekhof discloses an apparatus used for the destruction of toxic substances with UV radiation. The UV radiation itself is pulsed to optimize the energy contacting the sample. Wekhof further teaches that “a great enhancement in the destructive capability of the UV radiation may be achieved by adjusting...the pulse rate...delivered to the medium” (col.3, lines 34-42). For this reason, it would have been obvious to pulse the UV radiation employed by the apparatus of Nakamura.

8. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nakamura as applied to claim 1 above, and further in view of Akagi (JP 1-182527).

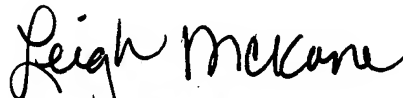
Nakamura is silent with respect to locating the discharge apparatus within the precombustion gas stream of a combustion chamber. Akagi teaches an apparatus including a combustion chamber **3** wherein a UV lamp **16** is positioned in the precombustion gas stream **10**. Akagi discloses that the positioning of the UV lamp in this position improves combustion by converting exhaust gas that backflows in the intake port **11**. It would have been obvious to one of ordinary skill in the art to use the discharge apparatus of Nakamura in the manner claimed by Akagi since Nakamura teaches that the apparatus is effective in the decomposition of organic contaminants.

Conclusion

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Leigh McKane whose telephone number is 571-272-1275. The examiner can normally be reached on Monday-Friday (5:30 am-2:00 pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gladys Corcoran can be reached on 571-272-1214. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


Leigh McKane
Primary Examiner
Art Unit 1797